

Honors Geometry: Unit 5 Assignment Sheet

Similarity & Midterm

Day	Date	Topics	Homework
1	Fri., 3/16	8-1: Ratio & Proportion 8-2: Similar Polygons	p. 418 2-46 E also # 60; *omit 22, 24, 34, 44* p. 425 2-48 E *omit 30*
2	Mon., 3/19	8-3: Similar Triangles: AA, SAS ~, SSS ~ 8-4: Similarity in Right Δ s	p. 435 4, 6, 8, 10, 14, 16, 18, 24, 26 p. 442 6, 8, 18, 26, 34, 36
3	Tues., 3/20	**** QUIZ ****	
4	Wed, 3/21	8-5: Proportions in Triangles 8-6: Perimeter & Area of Similar Figures	p. 448 2-38 E; 50 *omit 28, 30, 34* p. 456 2-36 E; *omit 30 and 34*
5	Thurs., 3/22	Review	Finish Review Sheet & STUDY
6	Fri., 3/23	**** TEST **** * PROJECT DUE *	Begin Midterm Review
	Mon., 3/26	Finish Midterm Review	STUDY for Midterm
	Tues., 3/27	MIDTERM	

AA Similarity Postulate:**(AA ~ Postulate)**

If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.

Side-Angle-Side Similarity Theorem:**(SAS ~ Theorem)**

If two sides of one triangle are proportional to two sides of another triangle and the included angles are congruent, then the triangles are similar.

Side-Side-Side Similarity Theorem:**(SSS ~ Theorem)**

If the corresponding sides of two triangles are proportional, then the triangles are similar.

Theorem:

The altitude to the hypotenuse of a right triangle divides the triangle into two triangles that are similar to each other and to the original.

Corollary:

The length of the altitude to the hypotenuse of a right triangle is the geometric mean between the lengths of the segments of the hypotenuse.

Corollary:

The altitude to the hypotenuse of a right triangle intersects it so that the length of each leg is the geometric mean of the length of its adjacent segment and the length of the entire hypotenuse.

Side Splitter Theorem:

If a line is parallel to one side of a triangle and intersects the other two sides, then it divides those sides proportionally.

Corollary:

If three parallel lines intersect two transversals, then the segments intercepted on the transversal are proportional.

Triangle-Angle-Bisector Theorem:

If a ray bisects an angle of a triangle, then it divides the opposite sides into two segments that are proportional to the other sides of the triangle.

Perimeters & Area of Similar Figures:

If the similarity ratio of two similar figures is $a:b$, then

- (1) the ratio of their perimeters is $a:b$ and
- (2) the ratio of their areas is $a^2:b^2$.

Areas & Volumes of Similar Figures:

If the similarity ratio of two similar figures is $a:b$, then

- (1) the ratio of their areas is $a^2:b^2$ and
- (2) the ratio of their volumes is $a^3:b^3$.